

Max's Spooky Harvest Math Assessment

Learning objective: To apply Grade 3 mathematical skills including money, area, perimeter, and multiplication in a seasonal context.

Read each question carefully. Show your working out in the space provided. Max the monkey has been busy preparing for the fall harvest festival!

Max is organising a harvest stall. He has 12 large pumpkins costing £3.50 each and 20 smaller gourds costing £1.20 each. He is also designing a rectangular patch for his display, which measures 6 metres by 4 metres.

Word bank: perimeter · area · total · product · calculate · estimate · pounds · pence

1. Calculate the total cost of all 12 large pumpkins. Show your working. (2 marks)

2. Max wants to buy some spooky decorations. If he has a £50 note, how much change will he receive if he spends £34.65? (2 marks)

3. Calculate the perimeter and the area of Max's rectangular pumpkin patch (6m by 4m). (3 marks)

4. Max arranges his gourds into 4 equal rows. If he has 20 gourds in total, how many gourds are in each row? Write this as a division calculation. (2 marks)

5. Explain why the area of a shape might change if the perimeter stays the same. Use an example to justify your answer. (4 marks)

6. Max finds 8 boxes of apples. Each box contains 15 apples. He gives 25 away to his friends. How many apples does he have left? Show your method. (3 marks)

7. Compare and contrast the cost of one large pumpkin (£3.50) and three small gourds (£1.20 each). Which is more expensive and by how much? (4 marks)

8. Max wants to design a new display area. Write a short plan (50-75 words) describing a shape that has an area of 24 square metres. Include a justification for why you chose those specific dimensions and what might happen if the shape was not a rectangle. (5 marks)

Draw: Draw a rectangular display area with an area of 12 square metres. Label the length and the width clearly.

Extension challenge: Total: /25. Challenge: If Max sold all his pumpkins and gourds at the prices listed in the passage, how much profit would he make if his initial costs were £45.00? Justify your calculation.